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ABSTRACT

A study was conducted to estimate the disabled population of Minnesota, provide information on the severity and nature of the disabilities, and identify the unmet needs of the disabled. Interview data was obtained on 6,730 Minnesotans. Approximately 14.5% of non-institutionalized Minnesotans were found to have functional disabilities, the majority of which were of a physical nature. Adjustments to physical limitations and employment-related difficulties were perceived as the most important problems associated with disabling conditions. Among the disabled, 53% could drive their own vehicles and 30% had received one or more public services from human service agencies. Disabled persons were found to have a higher hospitalization rate and frequency of contact with physicians than the general population, and more problems in obtaining medical care. Included in the appendixes are nine tables of data. Reviews of the literature and of the methods and procedures used in the study are also provided. (DLS)

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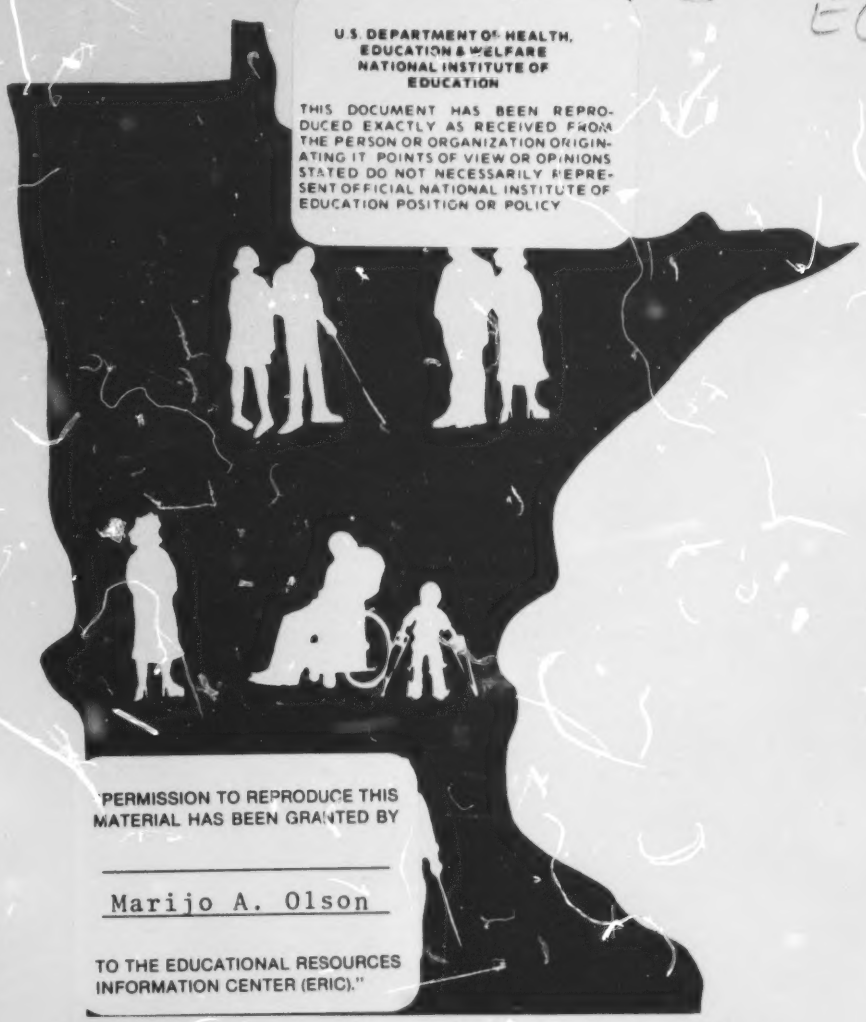

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ERRATUM: The Comprehensive Epilepsy Program is affiliated with the University of Minnesota.

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THE ASSESSMENT OF DISABILITY IN MINNESOTA
A HOUSEHOLD SURVEY

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THE ASSESSMENT OF DISABILITY IN MINNESOTA: A HOUSEHOLD SURVEY

INTRODUCTION

Statement of the Problem

There have been many studies which have attempted to estimate the population of the various types of disability groups. Very few of these studies defined disabilities in terms of how they limit the person's ability to function in society. Most of these studies have been based on the medical model which describes the disability in terms of a medical diagnosis or label.

A medical diagnostic model alone gives little information regarding the remaining functional capacities of an individual. It does not include the social, vocational and psychological problems and limitations caused by the disability. For example, a diagnosis of "hemiplegia due to cerebral thrombosis" indicates that the patient has had a vascular lesion resulting in anything from slight weakness to complete paralysis of one side of the body. This medical diagnosis does not define the problems the patient may encounter in living independently, in working, or with functioning in society.

The medical diagnostic model does not provide the information necessary to identify modifications of the work and community environment which will permit the independent functioning of the disabled person. Nor does it indicate what functional capabilities remain.

Due to the lack of information on functional limitations and the resulting needs of the disabled, state agencies responsible for providing social, medical and rehabilitative services to the citizens of Minnesota have not had reliable data upon which to plan programs and base decisions concerning the allocation of their resources. The agencies simply do not know the extent and distribution of these kinds of needs among the population and do not know how adequately these needs are being met by current programs.

Objectives of the Study

In order to provide human service agencies in Minnesota with detailed information useful for efficient planning, evaluation and resource allocation, this study attempted to:

1. Estimate the disabled population of Minnesota using a functional definition of disability which included persons having physical disabilities, speech impediments, hearing disabilities, blindness and other visual disabilities, chemical dependency, mental illnesses, and developmental disabilities
2. Provide information on the severity and the nature of disabilities
3. Identify the unmet needs of these disabled persons

This study attempted to provide reliable information to answer the following questions:

1. What proportion of Minnesota's non-institutionalized population is functionally disabled?
2. How can these people be described in terms of age, sex, race, marital status, socio-economic, and educational characteristics?
3. What kinds of functional limitations do they have?
4. Where are the disabled geographically located in Minnesota?
5. To what extent do these disabled persons utilize medical care services and what kinds of problems do they encounter when they seek medical care?
6. What are the major problems reported by disabled persons having different types of disabilities?
7. What services are identified by disabled persons as most needed?

Significance of the Study

In order to make the data more usable, this study adds three dimensions to the experimental design that are not included in other demographic studies of disabled persons:

1. The use of a system of classifying disabilities according to the kind of interference the disability imposes on **functional** areas of living
2. The gathering of disability data in the form of the reporting persons' **perceptions** of existing disabilities within their households
3. The use of a household survey to develop reliable estimates of the disabled population

This study makes a distinction between "impairment" defined by the medical diagnostic model and "functional limitations" and develops an instrument to identify the disabled population in Minnesota according to a functional limitations model. It was hoped that this study would:

1. Identify unmet needs of disabled Minnesotans
2. Provide public and private agencies with data for evaluating the relevance of their services to the current needs of the disabled
3. Be useful in developing and planning more appropriate services to meet the needs identified in this study

Strengths of the Study

This study is unique in its methodology for selecting households to be interviewed and in gathering its data directly from the consumers of human services through extensive interviewing in the home. It focuses on functional limitations which result from disability since it is those functional limitations which interfere with the disabled persons' life styles. It is the perception of disabled persons' functional limitations which results in seeking the resources of human services agencies.

Never before has a systematic survey of these perceived needs been made on a state and regional basis. The different types of information gathered by this study, e.g., general population characteristics, data on the disabled population and needs assessments, etc., can be internally compared because all of the data were obtained from the same sample at the same time. When data are drawn under different circumstances, comparisons are difficult.

The interview method employed by this study produced more accurate information because questions contained in the survey instrument could be clarified until respondents understood what was being asked of them. This method also permitted data-collectors to return to households missed on previous visits which resulted in a return rate on this study of 93 percent.

Limitations of the Study

The design of this study has imposed certain constraints of which the reader should be aware. Disabled persons living in institutions or on military reservations were not included in this study. The time factor may also affect the interpretation of the results. The data were based on household interviews taken in 1976. The extent to which these data will be representative of the year 1978 or later is unknown, although it is felt that differences will be minimal.

Some data inaccuracies are inevitable in an extensive study of this type. Results obtained are subject to three types of errors: (1) sampling errors, (2) errors made in the collection of data, and (3) errors occurring in the process of data compilation.

Data inaccuracies may be caused by interviewers and/or by interview respondents. Interviewers may not have asked the questions the way the questions are worded on the questionnaire. These differences in wording of questions may cause differences in responses and result in data errors. Training sessions designed to minimize this type of error were provided to all survey interviewers. Respondents' unwillingness to answer questions truthfully or their not having accurate information may also have resulted in survey errors.

Data inaccuracies may also result from the fact that approximately seven percent of the occupied households were not interviewed because the respondents were absent, refused to cooperate, or there were no eligible respondents found in the household. Statistical weighting and adjustments were made to limit the effects of these non-interviews.

Another limitation is that the perception of respondents regarding the disabilities reported in the household may be inaccurate. Disabilities identified in this survey were based on responses given by respondents rather than from the disabled individuals' medical records. The extent to which respondents' answers concerning functional limitations corresponded to medically defined conditions is not known.

Studies have shown that information obtained from health interview surveys does not accurately reflect recorded medical diagnoses. However, for use in planning and in identifying areas of perceived needs, household interview surveys are an important tool since the data obtained from this type of survey reflect the respondents' perceived needs and can be used to predict the demand for various social, medical, and rehabilitative services.Since the information in this report represents the perceptions of survey respondents rather than data gathered from official records, readers should expect to find discrepancies between the information reported here and the information possessed by the various human service agencies. It is essential that the users of this report be aware of this when interpreting the data.

Some respondents may have felt reluctant or hesitant to disclose information about their family members which they considered private. As a result, this study's estimate of the disabled population should be considered as a conservative figure since some persons with emotional problems, chemical dependency and other sensitive disabilities may not be identified in this study.

The results presented in this report are based on a univariate descriptive analysis of the data collected. Generalizations or interpretations based on these results may require further statistical analysis of relevant data.

Definition of Terms

Definitions of those terms used in this study which have specific meanings essential to understanding the results follow.

1. Disability is defined, for purposes of this study, as the limitation of capacity or inability to perform the normal activities of living necessary for people to carry out their roles in society. Disabilities result from chronic conditions or impairments. The conditions or impairments included in this study limit a person's performance of expected family, homemaking, work, social, school and/or recreational activities. There are also additional limitations resulting from disabled persons' inability to provide for their own personal care, to physically move about in the home and community, and/or to use their senses to perceive the world about them.

2. Housing Unit means a room or group of rooms, whether occupied or vacant, which are intended for occupancy as separate living quarters. In general, living quarters are considered separate and, therefore, a housing unit exists when (1) the occupants live and eat apart from any other groups in the building, and (2) there is either (a) direct access from the outside through a common hall, or (b) there are complete kitchen facilities for the exclusive use of the occupants, regardless of whether they are used. A housing unit may be occupied by a single family, an extended family, or two or more families living together.

3. Perception, in this study, means the way that interviewed persons understand and describe themselves and others in the interview.

Review of the Literature

The review of relevant literature of the last twenty years has identified four statewide investigations which attempted to estimate the number of disabled Minnesotans.

England, et al, 1958

In 1958, England, of the Industrial Relations Center of the University of Minnesota, conducted a survey of the physically handicapped in Minnesota. Data were obtained from 2,400 household interviews and 523 mail questionnaires completed by hospitals and related institutions. This study defined disability as a physical, emotional, or mental condition or illness which limited an individual's usual activities. This study estimated that 10% of Minnesota's population were disabled. Of this population, 62% were in the labor force range of 14-65 years of age. Of those disabled persons of labor force age, 51% were in need of vocational rehabilitation services. The estimates of the prevalence of disability were based on eleven broad disability categories.

Regional Rehabilitation Research Institute, 1967

In 1967, the Regional Rehabilitation Research Institute of Madison, Wisconsin, conducted a six state telephone survey to identify persons needing vocational rehabilitation services. A total of 1,382 households including 3,428 persons in the age range of 14-70 years were studied; 852 persons reported a disabling physical or mental condition. This survey estimated that 25% of Minnesota's population were disabled. The prevalence rates of each disability group were also reported. Follow-up household interviews were completed with 256 disabled persons to determine their rehabilitation needs. It was found that 20% of the selected 256 disabled persons were both eligible for and interested in receiving rehabilitation services.

Dawis, 1970

Through a grant from the Minnesota Division of Vocational Rehabilitation in 1970, Dawis studied the disabled population in Minnesota. Assuming that the "relative proportions of the constituents of the population had not changed materially in the interim years," he applied the prevalence rates determined by England et. al. in their 1958 study to the 1970 population data for projections. He estimated that 377,000 persons (10% of the state population) were disabled, and that 234,000 (66% of the handicapped population) were in the labor force age range of 14-65 years. Of those 234,000, 119,000 (51% of the handicapped of the labor force age) needed and were eligible for vocational rehabilitation services. Dawis also analyzed annual gains and losses of potential and eligible vocational rehabilitation clients and estimated that 16,000 persons should be added to the target population for vocational rehabilitation services in 1971.

The 1970 Census

In the 1970 Census, disability data were gathered from a five percent sample of the census survey. Respondents were asked if they had a physical disability or condition which limited the kind or amount of work they could do on a job or if their physical condition prevented them from working at all. The results showed that 184,362 individuals or 8.5% of the non-institutionalized population in the age range of 16-64 years were disabled for six months or more.

Inadequacy of Currently Available Estimates

Currently available estimates of the total number of disabled in Minnesota vary from 8.5 to 25% of the population. Estimates of the number in need of rehabilitation services also vary widely. All of these estimates are now out of date. None of the above studies dealt with any functional limitations other than in terms of gross work limitations. None of these studies attempted to provide reliable estimates for specific disability groups or to estimate the geographic distribution of various disabilities throughout the state. Furthermore, the methods used and the information gathered were not appropriate for use in allocating resources and/or for legislative and executive review of public expenditures.

Consequently, agencies responsible for providing social, medical, and/or rehabilitation services have lacked reliable data upon which to determine how to allocate their resources. Further, such agencies do not have the information needed to determine if current programs are adequately meeting the service needs of Minnesota's population. Finally, the number of functionally disabled persons and the nature of their disabilities have never been reliably determined at state or regional levels.

METHODS AND PROCEDURES

This section describes the data gathering methods, procedures for defining the study population and sample selection, the design of the survey instrument, data collection, and the editing, coding, and data processing procedures used in this study. Readers are referred to appendix A for a brief historical and technical description of the methods and procedures used.

Population

The population consisted of residents of all housing units within Minnesota exclusive of those living on military reservations, in institutions or in transient facilities. The study population consisted of approximately 1,253,000 households and 3,604,782 non-institutionalized persons in Minnesota.

Sample Selection

The Division of Vocational Rehabilitation granted the State Planning Agency funds to undertake the sample selection. The Survey Research Center of the University of Michigan was chosen as sub-contractor to design a stratified multi-stage area probability sample. This sample frame is currently available from the State Demographer's Office for use by other agencies. It was decided that a multi-stage probability sample provided the advantages of flexibility and economy of data collection while assuring the necessary geographic distributions to provide valid data.

A sample of 1,600 housing units was considered to be adequate. The sampling fraction derived was further adjusted to 1 in 500. Thus one housing unit out of each 500 in the state was surveyed. Prior to stratification, 25 of Minnesota's 87 counties were selected to be sampled because they were self-representing and 18 were selected to represent the remaining 62 counties. Further refinement of the sample was done within the county units. This multi-stage sampling procedure was designed to give every housing unit in the state an equal probability of being selected.

Design of the Survey Instrument

Because this study was a cooperative venture of several agencies, their various concerns were considered in developing the survey instrument. All cooperating agencies were asked to list their information needs and areas of concern. The general framework of the instrument was developed from this material and questions were drafted and presented to the agencies for confirmation or correction.

Pretesting was conducted with disabled persons who were rehabilitation professionals or clients, with some randomly selected households and with concerned individuals familiar with the instrument. Three phases of pretesting were conducted and the instrument was revised as necessary and submitted to the coordinating committee for approval.

The organization of the survey instrument consists of the following sections:

1. A "cover sheet" identified the type of family unit and recorded data on age, sex, marital status, education and employment status of family members.

2. "Section A" solicited information about access to medical services, the kinds of services used, hospitalizations, physicians' services, the regularity of physical examinations, distances and time required to reach medical facilities, health insurance coverage, home ownership, occupation, employment status, ethnic background and the combined income of all family members.

3. "Section B" consisted of a series of questions used to identify disabled persons. The questions were selected to cover three categories of major functional limitations in all age groups:

   (1) Major activity limitations: the ability to engage in social activities, attend school, keep house or travel to work

   (2) Chronic mobility limitations: the ability to move about the home and community

   (3) Independent living limitations: significant limitations to self-care caused by difficulty in walking, climbing stairs, stooping, bending or kneeling, handling, grasping or in reaching

4. "Section C" solicited specific information pertaining to disabled persons including their medical status, transportation problems and utilization of public services.

5. "Section D" solicited employment data for employed disabled individuals.

For each person initially identified as disabled, each functional limitation attributed to that person was pursued with a series of questions designed to clarify the nature and severity of the disabled person's problems. The date of onset, origin of the condition, diagnosis of the condition or impairment associated with the functional limitation, and the diagnostician (i.e., physician, speech therapist, respondent, etc.) were determined for each functional limitation.

Also identified was the major problem associated with each disabled individual's diagnosed condition. In-depth questions for persons with hearing impairments, visual impairments, and persons requiring help in personal care were developed at the request of several of the cooperating agencies.

Method of Data Collection

Fifty-six interviewers were selected to carry out the data collection. Many were census interviewers familiar with the areas they surveyed. Three training sessions on interviewing techniques and the use of this specific instrument were conducted. The interviewing began in May, 1976 and ended in September, 1976.

The interview phase was conducted according to generally accepted techniques and standards. Steps were taken to assure the accuracy of data by follow-up calls and/or visits where necessary. A random verification procedure was utilized in which ten percent of the selected households in the metropolitan area and five percent in rural areas were interviewed by telephone for verification of the information provided during initial interviews. None of the interviewers was found to have a pattern of discrepancies.

Editing, Coding, and Data Processing

Completed interviews were checked for correctness and edited for completeness by trained editors. Clarifications, corrections and/or omissions were reviewed weekly and content analyses were done to code responses to open-ended questions.

Responses to medical questions which required review within the context of the respondent's situation were edited by rehabilitation counselors. The Rehabilitation Services Administration's (RSA) classification of disabling conditions was used to code chronic conditions and impairments. Reported disabilities were also classified as severe or non-severe based on the RSA definition of severity. The data packets were then coded for computer analysis.

Sampling Results

The sampling rate adopted was adjusted to one in 500 housing units to yield a larger than necessary sample and more accurate data. This sample fraction resulted in the selection of 2,894 households for interview. In addition to the state sample, a sufficient number of households was selected for interview to permit regional analyses for the Metropolitan, St. Cloud and North Central regions.

Of the 2,894 households selected, 2,516 or 87% were considered valid. The remaining 13% were invalid because of (1) seasonal residence, (2) vacant household, (3) address not a dwelling and (4) errors made by listers.

Completed interviews were obtained from 2,335 households, or 93% of the valid households. Seven percent (181) of the households could not be interviewed. Of the non-interview households, 131 refused to be interviewed, 39 did not have anyone at home when interviewer called, 9 did not have appropriate respondents at home and 2 did not have eligible respondents.

Population Estimation and Sampling Error

The study was designed to produce reliable statewide estimates of the populations of various disability groups. Since these estimates were derived from a sample, they were subject to sampling and field work errors.

Standard errors used to measure sampling variability were computed using a paired comparison method for "self-representing primary units" and a successive difference model for "non-self-representing primary units." Standard error computations were made on those variables which were projected to the state population such as socio-economic and demographic characteristics, and services needed.

The sampling procedure was designed to provide each housing unit in Minnesota with an equal probability of selection. Thus, no weighting for each housing unit was required. However, since there were some housing units for which no interviews could be obtained, it was necessary that weights for all interviewed units be adjusted when estimating the total population. The adjustment was made for each chunk according to the following formula which computes weight for population estimates on the valid housing units of the sample.

$$\text{Weight} = \frac{\text{number of housing units selected}}{\text{number of housing units interviewed}} \times 500$$

On the results of this sampling, the statewide non-institutionalized population was estimated at 3,604,782. The standard error for the population estimate was approximately 2.4 percent.

Presentation of the Data

Three types of information were gathered from this survey: (1) data pertaining to the families, (2) data pertaining to the individual family members, and (3) data pertaining to the disabled. Both sample statistics and estimates of statewide populations were run for each type of data. Information presented in this report is primarily data pertaining to the disabled. Percentages reported in this document are based on the statewide estimates developed from the sample statistics obtained in this study. Sums of the percentages are rounded to the nearest decimal and may not always equal 100 percent.

RESULTS

The primary objective of this study was to develop reliable estimates of the number of persons in Minnesota perceived by family members as disabled, using a definition of disability based on functional limitations. This study also attempted to provide detailed information on the severity and nature of the disabilities as well as to identify the unmet needs of the disabled.

Data relating to these objectives are presented in the following sections. Most of the percentages used in this report are based on the statewide estimates of the disabled. The estimated numbers of functionally disabled persons reported in this study resulted from applying the prevalence rates derived from the study to population estimates furnished by the State Demographer's Office of the State Planning Agency.

Total Disabled Population Identified

Approximately one in seven (14.5%) non-institutionalized Minnesotans was identified as having a functional disability. The metropolitan area of the state was found to have a higher disability rate than the rural areas. The metropolitan area (including Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties) had a functional disability rate of 16.5% while the rest of the counties in the state had a 12.7% rate of disability. Table I shows the estimated prevalence rates of functional disabled Minnesotans.

Almost 99% of these disabled persons lived in primary family units. Approximately three families in ten had one or more functionally disabled members.

The Distribution of Disabled Persons by Region

Regional populations of the functionally disabled were estimated by using the prevalence rates derived from this study. A majority of functionally disabled persons (55.2%) lived in Region 11, the seven counties of the metropolitan area. Region 10 (Olmsted, Winona and Wabasha counties) contained 9%. An additional 8% were identified in Region 3 (St. Louis, Lake and Cook counties). Other regions each had less than 5%. Further information is reported in Table II.

The Distribution of Disabled Persons by County

If the urban rate is applied to populations of urban counties and the rural rate to appropriate counties, an estimate of the number of functionally disabled persons can be made for each county. Table III shows these estimates.

Socio-Demographic Characteristics

1. Relationship to Head of Household

   Nearly half (47%) of the disabled persons identified were the head of the household. Approximately one fifth (22%) were spouses and approximately one quarter were children. An additional 3% were relatives or in-laws and 1% were not related to the head of the household.

2. Age

Disabled persons identified in this study tended to be older than the general population. The average age of the disabled persons identified in this study was 45.5 years. The average age of the general population was about 32 years. The youngest disabled person identified was less than one year old and the oldest was 96.

Approximately one quarter (24%) of the disabled group were 19 or younger. Those of working age, between 20 and 64 years, made up nearly half the population (45%). Roughly a third (30%) of the disabled persons were 65 and older and 15% of the disabled persons were 75 and older.

3. Sex and Marital Status

The functionally disabled persons identified in this study were equally divided between male and female. Nearly 49% of disabled persons were married, a third (33%) had never married and the remaining 18% were widowed, divorced or separated.

4. Educational Level

Slightly over three-fourths (76%) of the disabled were not enrolled in school at the time of the interview. Of those who were in school, 85% were full-time students and 15% were part-time students. The average educational level of disabled persons was 9.3 years. Nearly 5% had never attended school; 14% did not go beyond grade school; 30% had a junior high school education; 33% had a high school education; 15% had some college or university and just under 2% had post-graduate education.

5. Employment Status and Income

Two-thirds of the functionally disabled persons identified were unemployed at the time of the interview. Of those persons who were working, 58% worked between 31 and 40 hours per week. Another 24% worked over 40 hours. Part-time workers (those who worked less than 30 hours per week) accounted for 17% of the working disabled population with 3% working less than 10 hours a week. The hours worked by disabled persons in this study ranged from 4 to 80 hours per week with an average of 39.4 hours. Of those who were currently working, 7% had more than one job.

Employed functionally disabled persons had an average annual income of $9,402 before deductions. In addition to income from current employment, one-quarter (25%) had income from other sources. Of these, three out of four (75%) received benefits from other sources including: Social Security, Veteran's Disability Benefits, Unemployment Compensation, Worker's Compensation, private or public insurance, pension or retirement funds, welfare, food stamps, rental units, sales profits, investments, or interest.

Slightly over three-fourths (76%) of the functionally disabled persons currently working worked in the competitive labor market; 18% were self-employed; and 7% worked in a sheltered workshop. Most expressed satisfaction with their current job; 36% were very satisfied; 48% were satisfied; and 8% were dissatisfied.

Of the functionally disabled persons not currently working, 42% were retired; an additional 26% were housewives not employed outside the home, 7% were students; 17% were not working because they were too disabled; 5% were currently unemployed; 1% were laid off; and 2% were on sick leave. Of those not currently employed, 6% reportedly had looked for work in the past four weeks prior to the interview.

Of those disabled who were not working at the time of the interview, nearly 85% had worked for pay before and over 16% were available for work. Of those who were available for work, 45% were interested in referral for assistance in finding a job.

Functional Limitations of the Disabled

This study identified the disabled in terms of the physical, mental or sensory limitations that interferred with or limited their ability to carry out the normal activities of life such as working, keeping house, attending school or engaging in social activities available in the community. Table IV describes these limitations and indicates their prevalence in Minnesota.

A survey of Table IV depicts the types of problems encountered by the disabled and the number of persons having specific functional limitations in Minnesota's population. It is more revealing and meaningful to know that 86,000 people have trouble going up or down stairs, 75,000 have trouble in walking over uneven ground, and 35,000 are unable to use public or private transportation than it is to know that 312,000 persons have physical disabilities (Table VI). A perusal of these functional limitations will quickly begin to suggest areas of concern for future architectural design, human services and social and vocational planning.

Table V describes those limitations more specifically related to pre-school and school age disabled. It reflects some of the concerns that should be addressed in planning efforts to serve this population's current needs and to develop the skills they will need to perform their adult roles in society.

Description of Disabled Persons by Major Disability Category

According to the medical model for describing these disabilities, 60% were physically disabled; 13% had hearing disabilities; 5% had visual disabilities; 3% were classified as having developmental disabilities (mental retardation, cerebral palsy, epilepsy, dyslexia, and autism); over 2% were identified as having a mental illness; over 1% had speech impairments; and 1% had an addictive disorders. Almost 15% of the population identified as disabled could not be classified as to the type of disability because of insufficient information. Table VI shows the estimated number and percentage of each of the major disability categories.

Distribution of Disabled Persons According to the Severity of Disability

Of the 521,544 functionally disabled persons identified in this study, approximately 276,000 were of working age (between 16 and 65). Slightly over 25% or 71,000 of these persons of working age were estimated to be severely disabled and 62% or 179,000 were not severely disabled. An additional 13% or 35,000 were persons for whom the severity of disability was undeterminable from the data provided (See Table VII).

Aids Used by Disabled Persons

Approximately 11% of the functionally disabled persons used physical aids to increase their independence in everyday life. Of these, approximately 40% used a cane, 22% used braces or special shoes, 8% used crutches or walkers, 4% used wheelchairs and 2% wore artificial limbs. Almost one in seven (13%) of disabled persons using an aid used two types of aids and nearly 4% used three or more.

Problems Associated with Disability

Nearly two-thirds (65%) of the respondents indicated that the most serious problems associated with disabling conditions involved the disabled persons' making physical adjustments for the limitations imposed by the disability such as the inability to care for themselves; loss of sight, hearing, touch; diet restrictions; immobility; etc.

Employment problems due to physical or behavioral limitations were cited by 12% as most important. Problems with social and interpersonal relationships were reported by 9% as most important. Educational problems involving difficulty in learning, comprehension or behavior were perceived as the most important for 8% of the disabled and mental problems and adjustments in coping with the disability were cited as the most important problem by 6% of the respondents.

Transportation Available to Disabled Persons

Respondents generally indicated that disabled persons had private transportation available to them in their community. Eighty-six percent had cars driven by friends or relatives available to them. Fifty-three percent could drive their own automobiles and 54% had taxis available in their community. Over half (57%) had public bus service available in their communities. Most indicated that private bus service, volunteer transportation systems, and medical vans were not available within their community.

Services Received and Needed by Disabled Persons

Persons interviewed in this research were given a list of sixteen broad descriptions of services provided by public agencies ranging from planning for a job or career, speech therapy, or home health care to public or subsidized housing. Respondents said that almost 30% of the disabled had received one or more of these services and 14% indicated they were receiving such services at the time of the interview.

Most of the service recipients had received one service but some had received more than one. Seventeen percent said they needed one or more services that they had not received previously. Of these, half (54%) indicated that they needed one service, 24% needed two services and 12% needed more than two services. Table VIII presents statewide estimates of public services received and needed by disabled persons.

Who Should Provide Services to the Disabled

Because disabled persons may require a variety of services from many sources, families were asked to express opinions about who should provide such services.

The preferred provider for medical care services was the federal government. Nearly half (47%) of the respondents stated their preference for federal support, 39% preferred state government support and an additional 20% favored county government support for medical care services. State government was the preferred service provider for job training services by 52% of the disabled persons; an additional 25% preferred the federal government as the provider of such training services. County and local governments were preferred for job training services by 19% of the respondents.

The federal and state governments were equally favored for providing income support. For assistance with employment counseling and job placement, 38% preferred local government and 27% preferred county government.

Local government was seen by 34% of the interviewed families as the most appropriate provider of special housing arrangements. State and county governments were favored for such services by 30% and 27% respectively. For the provision of special transportation services, 42% preferred local government, 24% county government, 22% voluntary agencies; 19% state government, and 8% federal government. Table IX displays the respondents' perceptions of who should provide the various types of services needed.

In summary, the federal government was preferred as the service provider for medical care and income support; state government was favored for job training, income support, and employment counseling; and local government for special housing arrangements and special transportation services. A majority (53%) of the families interviewed felt that state government should increase its funding support for services to disabled persons. Nearly 84% of the families interviewed considered this kind of survey of health and disability a proper function of state government.

The Use of Medical Care

1. Problems in Receiving Medical Care

   Generally, disabled persons encountered more problems in obtaining medical care than the general population. The problem most often mentioned for disabled persons was the cost of medical care. In addition, disabled persons had difficulty in getting medical care because the doctors' office hours were inconvenient or their offices were closed when the services were needed. A significant number of the disabled had difficulty in obtaining medical care and many more were prevented from obtaining medical care due to the above reasons.

Other problems encountered in receiving medical care include: not being able to get a physician because of lack of transportation, no doctor was available when required, or not knowing where to go for medical services.

2. Overnight Hospitalization

A considerably higher proportion of disabled persons had been hospitalized (24%) than of the general population (11%) surveyed. Disabled persons also had longer hospital stays than the general population with nearly 60% of them having stays exceeding five days.

Disabled persons who were hospitalized generally went to the hospital in privately owned vehicles and traveled in excess on one-half hour to get to the hospital. About two-thirds (66%) of the disabled were referred for hospitalization by a physician.

The most frequent conditions requiring hospitalization were diseases of the circulatory system and of the digestive system. However, a wide variety of medical conditions was represented in the reasons given for hospitalization. Surgery was also cited frequently as a reason for hospitalization.

Slightly less than one-third of the disabled had insurance to help pay the costs of their hospitalization. For those who did not have insurance, the average cost of hospitalization was $230.

3. Doctors Appointments

Disabled persons also saw their physicians more frequently than the general population, 59% as compared with 42% of the general population. Most of them (86%) used privately owned vehicles to go to the physician's office and it took them less than half an hour (22 minutes) on the average to get there. Most frequently, the physician they saw was the family doctor, although they reported seeing other physicians for a variety of reasons. The cost of doctors' visits for disabled persons averaged slightly over $40.

4. Physical Examinations by Physician

Nearly half (46%) of the disabled persons were reported as having had a check-up or physical examination within the last two years. Typically, these examinations included standard laboratory tests and X-Ray procedures appropriate to their individual needs. The survey showed that 46% of the disabled had medical check-ups during the 2 year period prior to the survey while 41% of the general population had such check-ups.

5. Health Insurance

The results of this survey indicate that slightly over 90% of Minnesota families had at least one family member covered by health insurance. Of those families covered by insurance, approximately three quarters (74%) had policies with commercial insurance companies and an additional 12% were covered by Medicare. Nearly half (48%) of the families with health insurance had coverage for all or most of their family members. Less than half (45%) of the families had e[illegible]oyer or union participation in payment of their insurance premiums.

Approximately 10% of the families did not have health insurance of any kind. The main reason given for not having health insurance was that it was too expensive (46%); they received Medicare or welfare coverage of medical costs (16%); they did not need health insurance (10%); and they could not obtain health insurance because of age, illness or poor health (5%).

SUMMARY AND CONCLUSIONS

State agencies responsible for providing social, medical, and rehabilitative services to the citizens of Minnesota have not had reliable data upon which to base decisions concerning the allocation of their resources. Currently available data are out of date or were obtained from studies which have not defined disability in terms of how the disabling condition limited their ability to function in society.

In order to provide reliable estimates of the perceived disabled population in Minnesota for use by human service agencies, this study attempted to:

1. Estimate various disabled populations in Minnesota using a functional definition of disability
2. Provide information on the severity and nature of the disabilities
3. Identify the unmet needs of the disabled identified in this study

The data for this study were collected from a sample of households throughout the state. An extensive interview was conducted in each of these households to determine the number of functionally disabled persons living there and their needs. This sample consisted of 2,335 households and yielded interview data on 6,730 Minnesotans including 964 persons identified as functionally disabled.

Sampling

The Division of Vocational Rehabilitation made a grant to the State Planning Agency to develop a statewide sample frame from which to draw housing units for interview. The Survey Research Center of the University of Michigan developed this sample frame and provided the methodology for assuring the technical quality of the sample. Two sets of sample frames were developed for this study and are available from the State Planning Agency for use in other surveys.

The statewide sampling rate was one housing unit in each 500. This resulted in the selection of 2,894 households for the state sample. Usable completed questionnaires were obtained from 2,335 of these households.

Instrument and Data Collection

The survey form was developed from an analysis of the cooperating agencies' requests for data. The form went through several revisions as a result of continuous input from these agencies. Detailed questions were asked of each family member identified as having a limitation in ordinary functions appropriate to that person's life style. The questionnaire was pretested three times and revised when necessary.

The survey was conducted during the summer and fall of 1976 by trained interviewers including a large proportion of experienced census interviewers. By analyzing the data obtained from the survey, the main objectives of this study were achieved.

Characteristics of the Disabled Population

Approximately one in seven (14.5%) non-institutionalized Minnesotans was found to have functional disabilities. Physical disabilities accounted for most of the functional limitations. Disabilities such as speech, hearing, blindness and other visual impairments, mental illness, chemical dependency, developmental disabilities etc., accounted for much smaller proportions.

Adjustments to physical limitations and employment related difficulties were perceived as the most important problems associated with disabling conditions. The disabling conditions were rated as severe or non-severe according to the Rehabilitation Services Administration Classification System. Of those disabled persons between the ages of 16 and 65, 26% were identified as being severely disabled.

The sexes were equally represented among disabled persons. Nearly half (49%) of the disabled were married. About a fifth (20%) were less than 16 years of age and 30% were 65 or older. The disabled had an average of 9.3 years of education with about one-third completing their high school education. More than half lived in the metropolitan area with Hennepin County having the largest number of disabled persons.

A third (33%) of the disabled persons 16 years or older were working at the time of the interview. Slightly over three quarters (76%) of those currently working were employed in the competitive labor market, 18% were self-employed, and about 7% worked in sheltered workshops. The employed disabled worked from 4 to 80 hours per week with an average of 39.4 hours.

The average annual income for disabled workers was $9,402 before deductions. About 25% of the employed disabled also received financial assistance from sources other than their jobs.

Transportation Available

Most of the disabled persons identified had privately owned vehicles driven by friends or relatives available to them in their communities. Many disabled persons (53%) could drive their own vehicles. Public bus service was available to over half (57%) of the disabled persons. Less than 17% had private bus or voluntary transportation systems or medical van services available to them in their communities.

Services Needed

About one in three (30%) of the disabled had received one or more public services from human service agencies. Almost 19% were currently receiving public services at the time of the interview. Over 17% indicated a need for at least one public service. The type of public services needed varied widely. No more than 10% of the disabled population needed any one type of service.

When asked who should provide services to disabled persons, Minnesota families in general preferred the federal government as the service provider for medical care and income support; state government for job training, income support and employment coun-

seling; and local government for special housing arrangements and special transportation services. A majority of those surveyed felt that state government should increase its funding for services to disabled persons.

Use of Medical Care

Disabled persons were found to have a higher hospitalization rate, a higher frequency of contact with physicians, and a higher porportion with problems in obtaining medical care than was true for the general population. Cost was the most frequently cited problem in obtaining medical care for disabled persons. This cost factor delayed 44% and prevented 31% of those citing this problem from obtaining medical care.

Slightly over 90% of the families had at least one member covered by a health insurance policy. Of those families with health insurance coverage, 48% had coverage for all or most of their family members. Of the 10% who carried no health insurance the most frequently stated reason was that it was too expensive.

Conclusion

The major accomplishments of this study are:

1. The provision of reliable estimates of the perceived prevalence of disability among the non-institutionalized population of Minnesota

2. The identification of various types of functional limitations in this disabled population

3. The identification of many unmet needs that disabled persons have

The data obtained in this study will provide a base of information about functionally disabled Minnesotans. Planners, policy managers and service providers of various public and private agencies at all levels may use this information to assist them in developing their programs, and legislators may find this information useful in allocating state resources. This data base provides state agencies with information never before available to any state government for use in identifying the needs of its citizens.

The major finding of this study was that the best estimated prevalence rate of functionally disabled persons in Minnesota is approximately 521,544 or 14.5% of the estimated non-institutionalized population of the state. In many instances data are summarized as percentages of the total estimated number of disabled persons and because the percentages are small, they may appear to be insignificant. However, this is not the case. For example, the reported figure of 5.9% of disabled persons needing training for employment represents 30,913 disabled persons who are in need of job training.

This study has established a data base that is available for answering specific questions that agencies or interested groups may have. The full value of the study can only be realized when agencies use this data base to address their particular planning needs. Access to the data files is possible through contact with the Management Support Unit of the Division of Vocational Rehabilitation, 444 Lafayette Road, St. Paul, Minnesota 55101.

APPENDIX A

HOW THE RESEARCH WAS ACCOMPLISHED

Sampling Strategy:

The Division of Vocational Rehabilitation contracted with the State Planning Agency for assistance in developing the study sample frame. The State Planning Agency contracted with the Survey Research Center of the University of Michigan to design a stratified multi-stage area probability sampling model for Minnesota. The sampling procedure was then applied to demographic data needed to select the study sample frame.

The two major characteristics of the design which became parameters for the sample were the known probability of sample selection and the economy of data collection. The sampling design which the Survey Research Center Developed required that counties be grouped according to their similarity on known demographic data. After the representative counties were chosen from within each group individual housing units were selected.

Survey Instrument Design

All of the cooperating agencies sent their questions to the coordinating committee for inclusion in the survey instrument. The instrument was field-tested three times and went through many revisions for integration and refinement. The first field test was carried out by experienced census interviewers on persons who were known to be disabled, both professional persons (mostly DVR counselors) and persons known to DVR as clients.

In the second test, the instrument was applied to a sample which included persons known to be disabled and others known not to be disabled. This test was run to assure that the instrument would, in fact, discriminate between the two groups.

The third test was conducted on a randomly selected street, which approximated a section of the study but was not included in the study sample. These trials were run using professional survey interviewers and research consultants involved in the study. The field testing clarified some of the details but revealed no significant flaws in the survey instrument.

Data Collection

The data collection phase was then implemented. Interviewers were selected, employed and trained. Most out-state interviewers were experienced census takers familiar with the areas in which they worked for this project. All interviewers went through structured training sessions on the survey instrument and on general interviewing techniques.

Procedures were developed to audit all completed survey forms. Returned questionnaires were edited for completeness by trained editors and items were checked for consistency with the data on each form.

The data were then coded for computer analysis and the coding was then audited for accuracy. Data based on the univariate analysis of each question included in the survey instrument are available to all interested agencies and form the basis for this report.

APPENDIX B

Table I

Estimated Prevalence Rates of Functionally Disabled Persons in Minnesota

Area	Prevalence Rate
Total State	14.5%
Metropolitan Area-consisting of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties	16.5%
Non-Metropolitan Area-consisting of all other counties	12.7%

Table II

Estimated Prevalence of Functionally Disabled Persons in Minnesota By Region

Region	Regional Population[1]	Estimated Prevalence Rate (%)	Number of Disabled Number[2]	(%)
Region 1	98,100	12.7	12,459	2.1
Region 2	60,900	12.7	7,735	1.3
Region 3	337,500	12.7	42,863	7.5
Region 4	193,700	12.7	24,599	4.3
Region 5	124,100	12.7	15,761	2.7
Region 6E	103,000	12.7	13,081	2.3
Region 6W	62,100	12.7	7,887	1.4
Region 7E	90,600	12.7	11,507	2.0
Region 7W	202,200	12.7	25,680	4.5
Region 8	140,700	12.7	17,869	3.1
Region 9	218,600	12.7	27,763	4.8
Region 10	398,900	12.7	50,661	8.8
Region 11	1,924,100	16.5	317,477	55.2
All Minnesota	3,954,500	14.5	575,342[2]	100.0

[1]Regional populations are based on estimates made on July 1, 1976, see "Population Estimates for Minnesota Counties 1977," published by Office of State Demographer, State Planning Agency, July, 1978.

[2]These figures represent the estimated numbers of disabled based on the total state population.

Table III

Estimated Numbers and Percentages of Functionally Disabled Persons by County

County	County Population[1]	Estimated Prevalence[2] Rate of Disabled (%)	Estimated Number of Disabled
Aitkin	12,700	12.7	1,613
Anoka	189,9000	16.5	31,334
Becker	27,300	12.7	3,468
Beltrami	29,800	12.7	3,785
Benton	22,400	12.7	2,845
Big Stone	7,800	12.7	991
Blue Earth	51,400	12.7	6,528
Brown	29,400	12.7	3,734
Carlton	29,000	12.7	3,683
Carver	33,900	16.5	5,594
Cass	20,000	12.7	2,540
Chippewa	15,700	12.7	1,994
Chisago	22,300	12.7	2,833
Clay	47,300	12.7	6,008
Clearwater	8,800	12.7	1,118
Cook	4,100	12.7	521
Cottonwood	15,100	12.7	1,918
Crow Wing	38,800	12.7	4,928
Dakota	178,900	16.5	29,519
Dodge	13,500	12.7	1,715
Douglas	25,100	12.7	3,188
Faribault	20,100	12.7	2,553
Fillmore	22,000	12.7	2,794
Freeborn	36,900	12.7	4,686
Goodhue	38,200	12.7	4,852
Grant	7,600	12.7	966
Hennepin	916,000	16.5	151,140
Houston	18,100	12.7	2,299
Hubbard	12,500	12.7	1,588
Isanti	20,000	12.7	2,540
Itasca	40,100	12.7	5,093
Jackson	14,500	12.7	1,842
Kanabec	11,400	12.7	1,448
Kandiyohi	33,000	12.7	4,199
Kittson	6,900	12.7	877

(continued)

Table III (Cont'd)

Estimated Numbers and Percentages of Functionally Disabled Persons by County

County	County Population[1]	Estimated Prevalence[2] Rate of Disabled (%)	Estimated Number of Disabled
Koochiching	17,500	12.7	2,223
Lac Qui Parle	11,100	12.7	1,410
Lake	13,700	12.7	1,740
Lake of the Woods	4,100	12.7	521
Le Sueur	21,600	12.7	2,744
Lincoln	8,400	12.7	1,067
Lyon	24,600	12.7	3,125
McLeod	28,800	12.7	3,658
Mahnomen	5,700	12.7	724
Marshall	13,300	12.7	1,690
Martin	24,800	12.7	3,150
Meeker	20,200	12.7	2,566
Mille Lacs	18,000	12.7	2,286
Morrison	28,000	12.7	3,556
Mower	43,200	12.7	5,487
Murray	12,100	12.7	1,537
Nicollet	25,100	12.7	3,188
Nobles	23,100	12 7	2,934
Norman	5,600	12.7	1,220
Olmsted	89,700	12.7	11,392
Otter Tail	48,800	12.7	6,198
Pennington	14,900	12.7	1,893
Pine	18,900	12.7	2,401
Pipestone	11,800	12.7	1,499
Polk	35,700	12.7	4,534
Pope	11,300	12.7	1,436
Ramsey	457,700	16.5	75,521
Red Lake	5,300	12.7	674
Redwood	19,500	12.7	2,477
Renville	21,100	12.7	2,680
Rice	44,000	12.7	5,588
Rock	11,000	12.7	1,448
Roseau	12,400	12.7	1,575
St. Louis	220,400	12.7	27,991
Scott	40,700	16.5	6,716
Sherburne	26,900	12.7	3,417
Sibley	15,700	12.7	1,994
Stearns	104,000	12.7	13,208
Steele	28,900	12.7	3,671
Stevens	11,300	12.7	1,436

(continued)

Table III (cont'd)

Estimated Numbers and Percentages of Functionally Disabled Persons by County

County	County Population[1]	Estimated Prevalence[2] Rate of Disabled (%)	Estimated Number of Disabled
Swift	13,300	12.7	1,690
Todd	23,700	12.7	3,010
Traverse	6,100	12.7	775
Wabasha	18,700	12.7	2,375
Wadena	13,600	12.7	1,728
Waseca	18,000	12.7	2,286
Washington	107,000	16.5	17,655
Watonwan	12,500	12.7	1,588
Wilkin	8,900	12.7	1,131
Winona	45,700	12.7	5,804
Wright	48,900	12.7	6,211
Yellow Medicine	14,200	12.7	1,804

[1]County populations are based on estimates made on July 1, 1976, see "Population Estimates for Minnesota Counties 1977," published by The Office of State Demographer, State Planning Agency in July, 1978.

[2]Two prevalence rates are used: (1) The estimated prevalence rate for the metropolitan area which is 16.5 percent, and (2) the estimated prevalence rate for the non-metropolitan area which is 12.7 percent. (See Table I.)

Table IV

Statewide Estimates of Perceived Functional Limitations[1] — All Ages

Type of Functional Limitation	Number	Percent[1]
Limited in the amount or kind of work because of having to take rest periods, not doing strenuous work, etc.	142,765	27.4
Have trouble in stooping, bending or kneeling	114,830	22.1
Have trouble in lifting or carrying	96,238	18.5
Unable to work at outside job	94,989	18.2
Have serious hearing loss	93,096	17.9
Have trouble in going up or down stairs	86,051	16.6
Have difficulties doing a job for pay because of limited physical abilities	80,815	15.5
Limited in outside activities such as church, clubs etc., because of physical or emotional health reasons	76,437	14.7
Have trouble in walking over uneven ground	74,767	14.4
Have trouble in reaching with one or both arms straight over head	66,003	12.7
Need special medicine to control severe breathing difficulties	42,721	8.2
Have trouble reading print even when wearing glasses	41,210	7.9
Need special medicine to control diabetes	40,831	7.8
Cannot see clearly even when wearing glasses	39,742	7.6

(continued)

Table IV (Cont'd)

Statewide Estimate of Perceived Functional Limitations[1] — All Ages

Type of Functional Limitation	Number	Percent[2]
Unable to use private or public transportation	35,261	6.8
Have fainting spells, blackouts, etc.	32,339	6.2
Need special medicine to prevent or control fainting spells, seizures, etc.	29,642	5.7
Have problems speaking clearly	28,617	5.5
Have trouble in picking up small objects between thumb and first finger	24,781	4.8
Need special medicine to control muscle spasms or shaking	21,875	4.2
Have difficulties getting along with others	19,895	3.8
Unable to leave the house because of permanent disability	12,392	2.4
Need assistance in looking after personal needs	10,310	2.0
Restricted in work because of seizures	8,392	1.6
Have trouble holding job because of emotional problems	8,280	1.6
Have trouble holding job because of drinking or drug problem	7,641	1.5
Restricted in work because of need for close supervision	5,125	1.0
Have two or more arrests	2,700	.5

[1]Functional limitations are not mutually exclusive. One person may have two or more functional limitations.

[2]Percentages are based on the total estimated number of disabled persons. Since the disabled may have several limitations, the percentages do not add up to 100%.

Table V

Statewide Estimates of Perceived Functional Limitations Specifically Related to Children

Type of Functional Limitation[1]	Number	Percent[2]
1. Pre-school children (through 4 years of age)		
Slow in learning to eat, dress or develop toilet habits	5,475	1.0
Slow in learning to talk or walk	3,500	0.7
Withdrawn when approached by others	3,125	0.6
Unable to play the way normal children do	2,250	0.4
Unable to play because of injury	1,500	0.3
2. School-age Children (5 to 18 years of age)		
Need special assistance in reading, writing or spelling	55,345	10.6
Have to go to special school	27,752	5.3
Have memory lapse, daydreams	22,350	4.3
Have behavior or discipline problems	14,919	2.9
Unable to take part in active games	14,889	2.9
Withdrawn when approached by others	6,625	1.3
Unable to go to school because of injury	1,000	0.2

[1]Functional limitations are not mutually exclusive. One person may have two or more functional limitations.

[2]Percentages are based on the total estimated number of disabled persons and will not add up to 100%

Table VI

Statewide Estimated Number and Percentage of Disabled Based on the Medical Model of Disability

Major Disability Category	Number	Percent
Physical disability	311,915	59.8
Speech	7,146	1.4
Hearing	65,621	12.6
Blindness and vision	26,412	5.1
Chemical dependency (addictive disorders)	5,891	1.1
Mental illness	12,515	2.4
Developmental disabilities	16,247	3.1
Not ascertainable	75,796	14.5
TOTAL	521,544[1]	100.0

[1]This figure represents the estimated number of non-institutionalized functionally disabled identified in this study and is different from the total number of disabled estimated on the basis of the total state population as as shown in Table II.

Table VII

Estimated Number and Percentage of Disabled Persons by Severity[1] of Disability

Severity of Disability	Number	Percent
Severely Disabled	70,618	25.6
Non-severely Disabled	169,954	61.6
Undeterminable Severity	35,216	12.8
TOTAL	275,788[2]	100.0

[1]Rehabilitation Services Administration definition of severe disability was used for classification.

[2]Total excludes 245,756 disabled under 16 or over 65 years of age.

Table VIII

Statewide Estimates[1] of Public Services Received and Needed by Disabled Persons

Type of Service	Services Received During Past Twelve Months		Unmet Service Needs[2]		Total Perceived Needs	
	Number	Percent	Number	Percent	Number	Percent
Vocational Services:						
Career or Job Planning	19,263	3.7	26,899	5.2	46,162	8.9
Job Training	13,305	2.6	30,913	5.9	44,218	8.5
Sheltered/Supervised Employment	3,625	0.7	5,625	1.1	9,250	1.8
Job Finding Assistance	15,410	3.0	29,096	5.6	44,506	8.6
Personal Services:						
Personal or Family Problem Counseling	33,873	6.5	30,752	5.9	64,625	12.4
Home Health Care	15,851	3.0	15,060	2.9	30,911	5.9
Home Delivered Meals	3,833	0.7	6,458	1.2	10,291	1.9
Housekeeping & Home Maintenance	15,876	3.0	24,693	4.7	40,569	7.7
Therapy:						
Physical or Occupational Therapy	25,348	4.9	21,178	4.1	46,526	9.0
Speech Therapy	14,227	2.7	14,752	2.8	28,979	5.5
Hearing Therapy	2,250	0.4	30,158	3.1	32,408	3.5
Educational Services:						
Special Education Programs	49,387	9.5	41,251	7.9	90,638	17.4
Day Activity/Day Care Programs (out of home	2,200	0.4	6,000	1.2	8,200	1.6 4
Special Living Arrangements:						
Full Time Living Arrangements Outside The Home	2,000	0.4	2,750	0.5	4,750	0.9
Public Housing/Subsidized Housing	5,975	1.1	12,558	2.4	18,533	3.5
Organized Recreational Services	24,058	4.6	26,006	5.0	50,064	9.6

[1]Estimated numbers and percentages are based on the total statewide estimated population of disabled persons. These estimates do not necessarily correspond with the records of public agencies since these data are based on the **perceptions** of survey respondents.

[2]These figures represent persons who had not received the indicated services in the past 12 months but perceived the need for them.

Table IX

Perceptions of Who Should Provide Services to Disabled Persons[1]

Type of Service	Alternative Providers					
	Federal Gov't	State Gov't	County Gov't	Local Gov't	Voluntary Agencies	No Opinion
Medical Care	47.4	39.0	20.5	13.8	3.3	9.4
Job Training	25.4	51.8	19.1	19.7	8.2	8.7
Income Support	44.0	43.2	18.4	9.0	3.3	10.3
Employment Counseling	9.1	37.4	26.7	30.5	11.5	9.2
Special Housing Arrangements	18.4	29.8	27.1	34.7	7.6	9.9
Special Transportation Services	8.0	19.7	23.7	42.1	22.0	9.8

[1]Multiple responses were given. The percentages were based on the total number of families from which a complete interview was obtained.

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